

III VERSION OF THE CLAIMS, PARAGRAPHS THE SPECIFICATION AND
THE ABSTRACT
WITH MARKINGS TO SHOW THE CHANGES MADE

IN THE CLAIMS

1. (amended) A [Method] method of storing solar energy [with reducing the CO₂ content of air, characterized by the method], said method comprising the steps of :

[(a)] producing by photosyntheses an amount of biomass capable of forming charcoal;

[(b)] converting [the] said amount of biomass into charcoal;

[(c) permanently] extendedly storing of a predetermined substantial fraction of [the] said charcoal; and

[(d)] converting [only the] a remaining portion of [the] said charcoal into energy or an energy source[.] with concomitant release into the air of a corresponding amount of CO₂;

whereby said corresponding amount of CO₂ released into the air during said step of converting of said remaining portion of charcoal into energy or an energy source being reduced as compared to the amount of CO₂ released into the air when the entire amount of said biomass is converted into energy or an energy source.

3. The [Method] method [according to claim 1 or 2, characterized in that the] as claimed in claim 1, wherein said step of extendedly storing of said remaining portion of said charcoal encompasses storing said remaining portion of said charcoal under an inert gas condition.

4. The [Method] method [according to claim 3, characterized in that] as claimed in claim 3, wherein said step of extendedly storing of said remaining portion of said charcoal under an inert gas entails using CO₂ as [the] said inert gas.

5. The [Method] method [according to any one of claims 1 to 4, characterized in that] as claimed in claim 1, wherein said step of extendedly storing of said substantial fraction of [the] said charcoal [is stored] entails storing said substantial fraction of said charcoal in at least one [mine] subterraneous [cavities] cavity.

Please add the following new claims:

6. The method as claimed in claim 5, wherein said step of extendedly storing said substantial fraction of said charcoal in at least one subterraneous cavity further comprises selecting said subterraneous cavity from a coal mine, an ore mine or a salt mine.

7. The method as claimed in claim 1, wherein said step of extendedly storing said substantial fraction of said charcoal entails storing said substantial fraction of said charcoal in an above-ground bunker facility.

IN THE SPECIFICATION

Page 1, please amend lines 4-15 to read:

[Technical Subject] Background Of The Invention

Field Of The Invention

The invention relates to a method of storing solar energy in conjunction with reducing the CO₂ content of air.

During the generation of energy from fossile fuels, CO₂ is released into the atmosphere in considerable amounts. According to presently valid climate models, there occurs thus a rise in the CO₂ content of the atmosphere. This rise produces a “greenhouse effect” and thereby a rise in the mean global temperature which, in turn, may result in serious climate changes. Therefore, efforts are made to reduce the CO₂ emission.

[State of the Art] Description of the Prior Art

Page 2, please amend lines 8-14 to read:

[DISCLOSURE OF THE INVENTION] SUMMARY OF THE INVENTION:

[The invention is based on the object of providing a method of producing and storing energy from solar energy while simultaneously effecting a reduction in the CO₂ content of the air].

Therefore, with the foregoing in mind, it is a primary object of the present invention to provide a new and improved method of producing and storing energy from solar energy which is not associated with the aforementioned drawbacks and limitations of the prior art methods.

Another and more specific object of the present invention aims at eliminating the drawbacks of the prior art methods and, in particular, at providing a new and improved method of storing solar energy while simultaneously effecting a reduction in the CO₂ content of the air. Now, in order to implement these and still further objects of the invention, which will become more readily apparent as the description proceeds, the method of the present development is manifested, among other things, by the following features.

Page 3: please amend the first full paragraph to read as follows:

Turning now specifically to Example 1 [: Charcoal] charcoal which has been produced from photosynthetic biomass in known manner, is stored in a bunker plant. For

this purpose, the charcoal is infed into the bunker plant and outfed therefrom upon request by using technically conventional conveying means. For example, subterraneous cavities such as present in a coal, ore or salt mine or the like as well as known above-ground constructions are considered for such bunker plants. The charcoal storage is intended for time periods of up to 20 years or more. In order to prevent ignition or oxidative degradation, the charcoal is stored under non-ignitable protective gas having a density greater than air such as CO₂ or, if desired, a rare gas. Each bunker plant is equipped with known means in a manner such that the stored charcoal is protected from water ingress and/or excess temperatures. A number of mutually separate charcoal reservoirs may be provided in a given bunker plant.

Page 6, after line 20, please add the following new paragraph:

While there are shown and described the preferred embodiments of the invention, it is to be distinctly understood that the invention is not limited thereto, but may be otherwise variously embodied and practiced within the scope of the following claims.

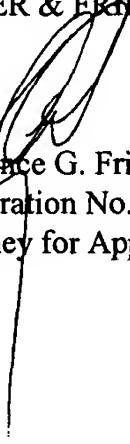
IN THE ABSTRACT OF THE DISCLOSURE

Please substitute the Abstract presented hereinbelow for the Abstract currently of record:

An amount of photosynthetically produced biomass such as wood is converted into charcoal and a substantial portion of the charcoal is permanently stored. The remaining residual amount is converted into energy or an energy source like hydrogen. The main portion of the charcoal remains in storage for sustainable energy supply by means of combustion reversal, however, may be utilized at any desired time for generating energy or an energy source like hydrogen.

Respectfully submitted,

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RESP01_217